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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 09/726,401 | 12/01/2000 | Jin Soo Lee | HI-028 | 1358 |
| 34610 | 7590 | 03/08/2004 | EXAMINER | |
| FLESHNER & KIM, LLP | | | MAHMOUDI, HASSAN | |
| P.O. BOX 221200 | | | ART UNIT | PAPER NUMBER |
| CHANTILLY, VA 20153 | | | 2175 | 13 |
| DATE MAILED: 03/08/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|------------------------------|------------------------|---------------------|--|
| | 09/726,401 | LEE ET AL. | |
| Examiner | Art Unit | | |
| Tony Mahmoudi | 2175 | | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 19 November 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-9 and 17-25 is/are allowed.

6) Claim(s) 10,11,13 and 26 is/are rejected.

7) Claim(s) 12 and 14-16 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: ____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's Request for Continued Examination (RCE) submission, and applicant's amendments filed on 19-November-2003 have been entered.

Remarks

2. In response to communications filed on 19-November-2003, claims 10-11, 13-16, 19, and 21-22 are amended per applicant's request. Claims 1-26 are presently pending in the application.

Specification

3. The arrangement of the disclosed application does not conform with 37 CFR 1.77(b).
Section heading appear boldfaced and underlined throughout the disclosed specification. Section headings should not be underlined and/or **boldfaced**. Appropriate corrections are required according to the guidelines provided below:

4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) **TITLE OF THE INVENTION.**
- (b) **CROSS-REFERENCE TO RELATED APPLICATIONS.**
- (c) **STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.**
- (d) **INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC** (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) **BACKGROUND OF THE INVENTION.**
 - (1) **Field of the Invention.**
 - (2) **Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.**
- (f) **BRIEF SUMMARY OF THE INVENTION.**
- (g) **BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).**
- (h) **DETAILED DESCRIPTION OF THE INVENTION.**
- (i) **CLAIM OR CLAIMS** (commencing on a separate sheet).
- (j) **ABSTRACT OF THE DISCLOSURE** (commencing on a separate sheet).
- (k) **SEQUENCE LISTING** (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 10-16 and 26 are rejected under 35 U.S.C. 101 because they include non-statutory subject matter.

The amended claim 10 recites “a multimedia data structure.....” which “....updates a reliability of present weight....”, and “updates a present weight using the updated reliability”. There is no clear definition in the “data structure” claim as to how the two entities relate to each other. A data structure claim should clearly indicate the inter-relationship of the functional elements of the structure.

Claim 26 is rejected under 35 U.S.C. 101 because it is dependent from the rejected independent claim 10.

The amended claim 11 recites “a method of updating weight of multimedia features
... based on a learning rate of the weights among the multimedia features higher than a learning rate of the weights among elements of a multimedia feature”, which presents an “abstract idea” which does not necessarily require technology. A claim must not be directed merely to an abstract idea, but must instead be tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful and tangible result.

Claims 12 and 16 are rejected under 35 U.S.C. 101 because they are dependent from the rejected independent claim 11.

The amended claim 13 recites “a computer readable medium having stored therein: weight among multimedia features and weight among elements of multimedia feature; and weight learning rate of the weights among the multimedia features that is higher than a weight-learning rate of the weights among elements of a multimedia feature”, which appears to be non-functional descriptive material stored on a computer readable medium. A claim must not be directed merely as “non-functional descriptive material stored on a computer readable medium”, but must instead be either “a series of steps to be performed on a computer”, or, “a machine or manufacturer for performing a process.”

Claims 14-15 are rejected under 35 U.S.C. 101 because they are dependent from the rejected independent claim 13.

Allowable Subject Matter

7. Claims 1-9 and 17-25 are allowed over the prior art made of record.

8. The following is a statement of reasons for allowance:

The applicants' arguments made in the amendments and remarks filed on 19-November-2003 have been fully considered and are found to be persuasive, in that the cited prior art do not disclose, teach, or suggest the claimed limitations of "reliability of the weight" and "updating the reliability of the present weight".

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

a method for updating multimedia feature information in a multimedia retrieval system using weight of multimedia features and reliability of the weight, comprising:
(c) updating the reliability of the weight by reflecting the retrieval performance evaluation and the retrieval environment change, as claimed in claim 1.

Claims 3-9 and 17-22 are allowed over the prior art made of record because they are dependent from the allowed independent claim 1.

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

a method for updating multimedia feature information in a multimedia retrieval system using weight of multimedia features and reliability of the weight, comprising:

 updating the reliability of the present weight by reflecting the calculated retrieval performance; and

 updating the present weight using the updated reliability, as claimed in claim 2.

Claims 23-25 are allowed over the prior art made of record because they are dependent from the allowed independent claim 2.

9. Claims 12 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants are reminded of the rejection made under U.S.C. § 101 to independent claim 11 above (paragraphs 5 and 6.) Any decision regarding the allowance of claims 12 and 16 requires that the applicants overcome the rejection made under U.S.C. § 101 to independent claim 11 above.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

wherein the weight is updated according to the following formula:

$$[\text{Reliability} \times \text{Old_W} + \text{Cur_W}] / [\text{Reliability} + 1]$$

wherein, $0 < a < 1$, and exponential term “a” in the formula for weights of feature is less than exponential term “a” in the formula for weights of elements of a feature, as claimed in claim 12.

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

wherein the weight is updated based on the following:

- (b) the more times the previous feature weights are learned with the feedbacks from the user, the less the feature weights are influenced by new feedback; and
- (c) the more recent the feedback is, the more the feedback influence to the feature weights update, as claimed in claim 16.

11. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants are reminded of the rejection made under U.S.C. § 101 to independent claim 13 above (paragraphs 5 and 6.) Any decision regarding the allowance of claims 14 and 15 requires that the applicants overcome the rejection made under U.S.C. § 101 to independent claim 13 above.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

wherein the weight is updated based on the following:

(b) the more times the previous feature weights are learned with the feedbacks from the user, the less the feature weights are influenced by new feedback; and
(c) the more recent the feedback is, the more the feedback influence to the feature weights update, as claimed in claim 14.

The prior art of record, Wactlar et al (U.S. Patent No. 5,835,667), Vaithilingam et al (U.S. Patent No. 6,411,724), and Aggarwal et al (U.S. Patent No. 6,408,293), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

wherein the learning rate is in relation to the reliability formula,

$$[\text{Reliability} \times \text{Old -W} + \text{Cur-}\backslash\text{V}] / [\text{Reliability} + 1]$$

wherein, $0 < a < 1$, and exponential term "a" in the formula for weights of features is less than exponential term "a" in the formula for weights of elements of a feature, as claimed in claim 15.

Response to Arguments

13. Applicant's arguments filed on 19-November-2003 with respect to the rejected claims in view of the cited references have been fully considered but they are considered moot in view of the new grounds of rejection.

Conclusion

14. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

February 26, 2004



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